PILLSBURY MILLS

IN

ASTORIA, OREGON

PILLSBURY greets you and is happy to show you through this Mill.

E. T. Christenson
Plant Manager

During your tour please observe the following safety precautions:

1. Stay with your guide.
2. Stay clear of all machinery.
3. Do not smoke.

Here in Astoria, we are on the banks of the mighty Columbia River where ocean freighters tie up at our docks to load flour for foreign lands. This is primarily an export mill. As such, it is one of the largest and most important operated by Pillsbury. Astoria flour is shipped to the Philippines, Hawaii, China, Japan, South America and other countries of the Pacific.

Pillsbury plants in ten other states manufacture a variety of products under the famous "PILLSBURY XXXX" label. Some of these plants are flour mills, some are soybean plants and some are feed mills. Some are engaged in the manufacture of prepared mixes for housewives and for bakers. The Pillsbury plant in Wellsburg, West Virginia, manufactures paper and paper sacks for packaging our products. The plant in Culver City, California, manufactures "Globe A-1" macaroni products. Supporting these manufacturing plants are many country and terminal grain elevators for storing and mixing grain. Like Astoria, each has its part to play in building and maintaining a market for our products.

Here, for example, are some of the Pillsbury products sold in grocery stores from Coast to Coast:

Pillsbury's Best Family Flour
Pillsbury Sno Sheen Cake Flour
Pillsbury Pancake Flour
Pillsbury Buckwheat Flour
Pillsbury White Cake Mix
Pillsbury Chocolate Fudge Cake Mix
Pillsbury Piecrust Mix
Pillsbury Hot Roll Mix
Pillsbury Farina

Flour milled here for domestic consumption is used locally and on the Pacific Coast.

Wheat is grown the world over, and there is an interesting history concerning the origin and development of wheat, stemming back to the days of the Bible and other early records. It is one of the world's most important cereal crops.

There are very many varieties of wheat grown, some of which are white or red in color, and are classified as soft or hard wheats. Soft wheats are ordinarily milled into pie, cake, cookie or biscuit flours. Hard wheats are milled into bread flours, or the two may be mixed for specific uses. Wheat for this mill is grown principally in Oregon, Washington, Idaho and Montana.

The operation of a flour mill is divided into six main functions:

1. Grain unloading, binning and storage.
2. Preparing the wheat for milling.
3. Milling.
4. Packing of finished product.
5. Storage of finished product.
6. Shipping of finished product.

GRAIN UNLOADING, BINNING AND STORAGE -- Considerable storage space is needed for a reserve supply of wheat to maintain the mill schedules and to store special

varieties of wheat that may be difficult to obtain at a later date when needed. In the industry, this is known as elevator space. Each carload of wheat is binned according to its variety, physical and chemical properties.

PREPARING THE WHEAT -- Wheat, when it is received at the mill, usually contains some foreign particles such as weed seeds, chaff and sand. These are removed by separators, aspirators, scourers and by washing the wheat with water.

MILLING -- Wheat consists of the following components: the germ, several layers of bran and the endosperm. The germ is the embryo of the new plant. The bran coats comprise the outer covering of the wheat, and the endosperm is the heart of the kernel. The endosperm becomes flour after it has been properly separated from the germ and bran and then reduced to a very fine particle size.

Milling is a reducing, classifying and selecting process. This process is accomplished by passing the wheat through a series of corrugated rolls which peel the bran and germ from the endosperm. After the partially ground wheat leaves one set of rolls, it is refined through sifters and purifiers containing silk cloth sieves which separate the bran and germ particles from the endosperm. This process of gradual reduction, sifting and purifying continues until approximately 72% of the wheat is in the form of fine pure flour. The remaining 28% is bran and

germ which will eventually be used in the manufacture of animal and poultry feeds.

PACKING -- At this particular mill, flour is packed only in fifty and one-hundred pound cloth and paper bags.

STORING -- These fifty and one-hundred pound sacks are transported on a long conveyor belt to the warehouse where they are stored to await shipment.

SHIPPING -- There are three ways of moving the finished product - by ship, by rail and by truck.

Thank you for your interest in flour milling and for your particular interest in Pillsbury Mills, Inc. at Astoria. We hope that during your trip through our mill and warehouse we have justified your visit and that the trip has been informative.

PILLSBURY MILLS, INC.